

means is combined in the same apparatus with an inking means and fountain solution applying means. DeBoer et al. describes the use of a lithographic printing ink with or without a fountain solution (Col. 8, lines 37-40) that obviously occurs on a printing press. However, that printing press is a separate apparatus from the ink jet device. Applicant's claimed invention calls for all of the noted "means" to be in the same apparatus (see teaching on page 13, lines 8ff). Clearly, this is not the case in the teaching of DeBoer et al. where individual apparatus may be used to accomplish an ink jet operation followed by supplying of ink and fountain solution on a printing press. Thus, Claim 12 is novel over the teaching in DeBoer et al.

The subject matter of dependent Claims 13-16 is likewise novel over the teaching in DeBoer et al., at least when considered in combination with the subject matter of Claim 12. Thus, the anticipation rejection of Claims 12-16 over DeBoer et al. is incorrect and should be withdrawn.

Rejection Under 35 U.S.C. §103

Claims 1-11 have been rejected as unpatentable over DeBoer et al. taken with US Patent 5,569,573 (Takahashi et al.), US 6,566,029 (Kawamura et al.), and US 6,596,455 (Yanaka et al.). This rejection is respectfully traversed for the following reasons.

Considering independent method Claim 1, the Office Action argues that DeBoer et al. teaches all aspects of the claimed invention except the imageable coating comprising hydrophobic polymer particles. The Office Action then alleges that the secondary art would supply the missing teaching because Takahashi et al. teaches the use of microcapsules to increase print durability, Kawamura et al. teaches the encapsulation of reactive components in the image recording layer, and Yanaka et al. teaches the use of microcapsules to isolate a thermally reactive compound from co-reactants. The Office Action then argues that it would be obvious to one of ordinary skill in the art to encapsulate at least a portion of the imageable coating of DeBoer et al. in order to decrease scumming and stains and/or improve print clarity, durability, on-press developability, or storage stability.

Additional arguments are made in the Office Action with respect to the subject matter of dependent Claims 2-11, but those arguments are not

addressed in detail at this point. The patentability of the dependent claims resides at least on the patentability of the subject matter of Claim 1 although they may also be separately patentable.

As admitted in the Office Action, DeBoer et al. fails to teach or suggest imageable coatings or layers comprising hydrophobic polymer particles, which is an essential component of the presently claimed invention. It is such particles that can be made to coalesce in an imagewise fashion.

The Office Action is clearly mistaken when it alleges that DeBoer et al. teaches “imagewise converting the imageable coating with a liquid coalescing agent”, citing Col. 3, lines 37-41. In that portion of the patent, DeBoer et al., merely teaches the imagewise application of a fluid (defined more specifically in Cols. 5-7). It suggests nothing of a “coalescing agent” in that fluid as required by the presently claimed invention. Such an agent causes the hydrophobic polymer particles on the lithographic base or support to “coalesce” or fuse together in an imagewise fashion (see pages 11, lines 7-14 and 12, lines 28-31). This is not the same imaging mechanism used in DeBoer. Thus, DeBoer et al. fails to teach or suggest Applicant’s required imageable coating containing hydrophobic polymer particles as well as Applicant’s required means for fusing those particles in an imagewise fashion. There is no reason to apply a coalescing agent if there are no hydrophobic polymer particles to coalesce or fuse. Applicant’s claimed invention requires both features together and DeBoer et al. fails to appreciate that.

Thus, there is another serious deficiency in the teaching of DeBoer et al. besides that admitted in the Office Action.

None of the secondary references, alone or in any conceivable combination overcomes these deficiencies.

All of the cited secondary references relate to the use of microcapsules or microencapsulation for one reason or another, and upon decomposition of the microcapsules, a reactive or ingredient is released useful for the resulting image. For example, Takahashi et al. teaches the release of an oleophilic material having a functional group that reacts with a hydrophilic binder when the microcapsules are decomposed (Col. 2, lines 49-57). This has nothing to do with the coalescence of hydrophobic polymer particles that are well understood in the chemical arts to refer to “solid” particulates, not decomposable

microcapsules. Nothing in the teaching in Takahashi et al. about microcapsules would remotely suggest an imageable coating comprising hydrophobic polymer particles coalesced with an applied coalescing agent as required in the Applicant's invention. Moreover, even if the teaching about microcapsules is combined with the teaching in DeBoer et al., Applicant's claimed invention would still not be remotely suggested. The combined teaching would merely direct a skilled artisan to apply a metal sol to microcapsules using ink jet means, which is clearly not the presently claimed invention.

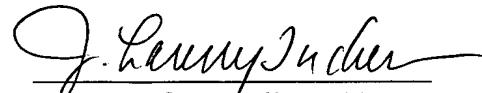
Similarly, the teaching in Kawamura et al. and Yanaka et al. is equally flawed. Nothing in those patents suggests the use of coalesced or fused hydrophobic polymer particles to form an imaged coating on a support. In Kawamura et al., any fusing of microcapsules or materials contained therein is achieved by imagewise application of heat (Col. 2, lines 42-52), not by imagewise application of a coalescing agent as required in the presently claimed invention. Similarly, according to Yanaka et al., microcapsules are decomposed by thermal imaging (Col. 4, lines 13-23), not by imagewise application of a coalescing agent. If this teaching is combined with DeBoer et al., the result would be ink jetting of a metal sol onto microcapsules that are decomposed upon imagewise application of heat. The two imaging techniques are not compatible. Even so, this is not the presently claimed invention where an image is obtained by, e.g. ink jetting a coalescing agent onto the surface of hydrophobic polymer particles that coalesce or fuse only in the imaged areas. Thus, the rejection of Claim 1 is in error.

The rejection of dependent Claims 2-11 is also in error as they are dependent upon patentable subject matter in Claim 1. However, the dependent claims may be separately patentable as well.

Thus, despite the careful consideration of each of Applicant's claims in the Office Action, there is no teaching or suggestion of the claimed invention from the combination of microcapsules from the secondary references with the ink jet teaching in DeBoer et al., and the rejection of Claims 1-11 is in error and should be withdrawn.

In view of the foregoing remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the examiner is earnestly solicited.

Respectfully submitted,



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